

Patent Claims

1. An air vent, especially for a motor vehicle, with an air-supplying air duct and with an air conduction device (4), the air duct in the air conduction device (4) being divided into at least two essentially cylindrical subducts (11a, 11b), characterized in that the cylindrical subducts (11a, 11b) are arranged parallel with respect to one another.

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2. The air vent as claimed in claim 1, characterized in that the air conduction device (4) provides a division of the air supplied through the air duct into at least four air streams.

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3. The air vent as claimed in one of the preceding claims, characterized in that at least one further subduct is provided, arranged around at least one of the cylindrical subducts (11a, 11b).

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4. The air vent as claimed in one of the preceding claims, characterized in that the air conduction device (4) has subducts (11a and 12a, 11b and 12b) arranged concentrically one in the other.

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5. The air vent as claimed in one of the preceding claims, characterized in that the air conduction device (4) has at least one helical or longitudinally indrawn spiral subduct (12a, 12b).

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6. The air vent as claimed in claims 4 and 5, characterized in that the helical subduct (12a, 12b) has at least one guide (13) which is arranged helically.

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7. The air vent as claimed in claim 5 or 6, characterized in that the pitch of the helix decreases toward the outlet port (10).

8. The air vent as claimed in one of the preceding claims, characterized in that, upstream of the air conduction device (4), a metering device is arranged, 5 which is designed in such a way that the air capable of being supplied to the individual subducts (11, 12) is controllable.

9. The air vent as claimed in one of the preceding 10 claims, characterized in that a device (5) for setting the direction of the air stream is arranged after the air conduction device (4).

10. The air vent as claimed in one of the preceding 15 claims, characterized in that the ratio of a narrowest cross section of one of the cylindrical subducts (11a, 11b) to the narrowest cross section of the associated helical subduct (12a, 12b) is variable from 1:1.5 to 1:0.3.

20 11. The air vent as claimed in one of the preceding claims, characterized in that each cylindrical subduct (11a, 11b) has arranged around it at least two helical subducts (12a', 12a'', 12b', 12b'') which can be 25 regulated independently of one another via separate control devices.

12. The air vent as claimed in claim 11, characterized in that in each case two helical subducts 30 (12a', 12a'', 12b', 12b'') are arranged around each cylindrical subduct (11, 11b), in the inflow region the air duct assigned to the cylindrical subducts (11a, 11b) being arranged between the two air ducts assigned to the helical subducts (12a', 12b' and 12a'', 35 12b'').

13. The air vent as claimed in claim 11 or 12, characterized in that the cylindrical subducts

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(11a, 11b) project beyond the helical subducts (12a', 12a'', 12b', 12b''), as seen in the air flow direction.

14. The air vent as claimed in one of the preceding
5 claims, characterized in that the air vent (1) has a lamellar air conduction device (15).

15. The air vent as claimed in claim 14, characterized in that the lamellar air conduction device (14) is of
10 centrally divided design, and the two parts can be regulated independently of one another.

16. A method for controlling the air outflow of an air vent as claimed in one of claims 1 to 15, characterized
15 in that a first metering device or flap (14) of at least one first air duct (11) and a second metering device or flap (14) of at least one second air duct (12) are alternately opened and closed by means of a control device.

20 17. The method as claimed in claim 16, characterized in that the alternate opening and closing take place in an oscillating manner.

25 18. The method as claimed in claim 17, characterized in that the oscillation frequency is selectable within a setting range, especially between 0.5 Hz and 10 Hz.

30 19. The method as claimed in claim 17, characterized in that the oscillation frequency is regulated as a function of one or more regulating parameters.

35 20. The method as claimed in claim 19, characterized in that the regulating parameters used are the interior temperature and/or the difference between a desired interior temperature and an actual interior temperature and/or a blower setting.

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21. A ventilation system for a motor vehicle, characterized by an air vent (1) as claimed in one of claims 1 to 15.